



Missouri Department of Transportation Truck Mounted Sign Maintenance Unit

It is the intent of MoDOT to have a sign maintenance vehicle that meets all required functions and takes into consideration safety of the traveling motorist and as well as the safety of the worker. It is relevant to MoDOT that the system being proposed is to be of standard, modular design so as to afford additions of equipment in the future. MoDOT will give consideration to the systems design based on safety, efficiency, standardization and versatility of the equipment being proposed.

Cab/Chassis: Current model year Cab and Chassis with minimum 17,500 GVWR, and 84" cab-to-axle. A Micro brake lock is required on all four wheels.

Truck Bed: (95 1/2" x 10 feet) Construction shall be of standard structural steel consisting of 6" frame rails, 8" stringers, 3" cross channels; positioned and reinforced to accommodate modular signing equipment. Diamond plate steel deck 1/8". Skip weld top and bottom. To include post storage under-bed for steel or wood posts. 8' x 48" Bulkhead; it shall be a "bolt on type" to allow for large sign or barricade storage, constructed of 2"x2" square tubing and 3/4" x 9 gauge mesh material. Lights shall meet Federal Highway Standards. The steps shall be equipped with hand rails.

Boom Unit: Shall be a telescopic stick boom, designed primarily for the purpose of sign installation and tool handling tasks. Must have a minimum of 1000 lb. lifting capacity. Boom construction shall be of two sections: main boom and a secondary boom that shall be capable of telescoping approximately 48" hydraulically, and a third boom, designed to accommodate or be able to attach to the secondary telescopic stick boom section using a 500 lb. manlift attachment or auger attachment (one attachment or the other, not a manlift and an auger at the same time). When fully extended, the unit should reach approximately 14'; when retracted, the reach should be approximately 10'. Control box shall have a minimum of 15' control cord. Boom should be capable of rotating 360 degrees non-continuous and shall contain a hydraulically driven worm gear with slewing ring gear design. Hydraulic system shall be designed to provide proper flow and PSI to operate all the hydraulic signing tools used for sign maintenance. Hydraulic tank shall hold 10 gallons with a 2000 PSI maximum. The mounting of the boom and turntable shall be near the cab and on the passenger side. Boom shall be capable of pulling a 4" x 8" wooden sign post from the earth.

Outriggers: Unit must have two hydraulic, telescoping outriggers to be mounted on the passenger side that contact the ground before protruding past the plane of the outside edge of rear duals. Outriggers must use square tube construction with 3" cylinders with controls at the workstation. Outriggers shall be designed to attach under the frame to stabilize the boom and telescoping platform. Outriggers must be designed for additional outriggers to be added in the future.

Earth Drill: Unit must have a McMillen Hydraulic Earth Drill Model #450 or equivalent. Drill must provide a minimum hydraulic flow of 5 GPM with a maximum hydraulic flow of 10GPM. Provide one heavy-duty telescopic extension. Include heavy-duty 8" auger with single or double flighting.

Auger: Provide an auger attachment capable of operating at a maximum of 3000 PSI. Auger attachment must have a 2" round collar. Maximum auger diameter shall be 12". Auger must have a high and low speed.

Manlift: Provide a manlift attachment capable of lifting one person with tools and/or signs. Maximum capacity of 500 lbs.



Sign Compartment: Shall be of a modular design, 6' x 38" x 40", made of 16 gauge mild steel to accommodate a 4' modular slide-in compartment for storage of signs. Signs will be stored on edge as opposed to being stored flat. The design of the interior slide-in compartment shall be designed to accommodate the district needs. Sign compartment shall be mounted on the driver's side.

The Missouri Highways and Transportation Commission reserves the right to waive technicalities and to reject any or all bids and no bid is final until formally accepted by the commission.